

Patent  
Serial No. 10/544,202  
Appeal Brief in Reply to Final Office Action of June 30, 2008,  
and Advisory Action of September 30, 2008

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of Atty. Docket: NL 030113

GILLIAN ANTOINETTE MIMNAGH-KELLEHER ET AL.

Confirmation No. 8136

Serial No. 10/544,202 Group Art Unit: 3736

Filed: AUGUST 2, 2005 Examiner: STOUT, M.C.

Title: DEVICE FOR DETERMINING A VALUE THAT IS REPRESENTATIVE OF  
ACCELERATIONS AS WELL AS AN ERGOMETER

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**APPEAL BRIEF**

Sir:

Appellants herewith respectfully present a Brief on Appeal as follows, having filed a Notice of Appeal on September 29, 2008:

REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee of record Koninklijke Philips Electronics N.V., a corporation of The Netherlands having an office and a place of business at Groenewoudseweg 1, Eindhoven, Netherlands 5621 BA.

RELATED APPEALS AND INTERFERENCES

Appellants and the undersigned attorney are not aware of any other appeals or interferences which will directly affect or be directly affected by or having a bearing on the Board's decision in the pending appeal.

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STATUS OF CLAIMS

Claims 1-15 are pending in this application. Claims 1-15 are rejected in the Final Office Action mailed in June 30, 2008. This rejection was upheld, in the Advisory Action that was mailed on September 30, 2008. Claims 1-15 are the subject of this appeal.

STATUS OF AMENDMENTS

Appellants filed on September 2, 2008 an after final amendment in response to a Final Office Action mailed June 30, 2008. The after final amendment did not include any amendments. In an Advisory Action mailed on September 30, 2008, it is indicated that the after final amendment filed on September 2, 2008 does not place the application in condition for allowance. This Appeal Brief is in response to the Final Office Action mailed June 30, 2008, that finally rejected claims 1-15, which remain finally rejected in the Advisory Action mailed on September 30, 2008.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention, for example, as recited in independent claim 1, is directed to a device 1 for determining a value that is representative of accelerations in at least two mutually perpendicular directions. As shown in FIG 1, and described on page 3, lines 21-31 of the specification, the device 1 comprises a sensor system 2 including at least two accelerometers 8, 9, 10 with which acceleration in the mutually perpendicular directions is convertible into electric signals.

As described from page 3, line 32 to page 4, line 2, the acceleration values are determinable by signal processing means 4, such as including a processor 16 shown in FIG 1, from an electric signal formed from the electric signals.

As shown in FIG 1, and described on page 4, lines 18-22, prior to the signal processing means 4, electric signals from the at least two accelerometers 8, 9, 10 are addable together by an adding element 3 to form the electric signal. As shown in FIG 1, the outputs of the at least two accelerometers 8, 9, 10 are directly

connected to the adding element 3 to form the electric signal for processing by the signal processing means 4.

The present invention, for example, as recited in independent claim 5, is directed to an ergometer for measuring a value that is representative of a physical effort of an individual. As shown in FIG 1, and described on page 3, lines 21-31, the ergometer comprises a device 1 that includes a sensor system 2 having at least two accelerometers 8, 9, 10 with which acceleration in mutually perpendicular directions can be converted into electric signals.

As described from page 3, line 32 to page 4, line 2, the acceleration values are determinable by signal processing means 4, such as including a processor 16 shown in FIG 1, from an electric signal formed from the electric signals.

As shown in FIG 1, and described on page 4, lines 18-22, prior to the signal processing means 4, electric signals from the at least two accelerometers 8, 9, 10 are addable together by an adding element 3 to form the electric signal. As shown in FIG 1, the outputs of the at least two accelerometers 8, 9, 10 are directly

connected to the adding element 3 to form the electric signal for processing by the signal processing means 4.

The present invention, for example, as recited in independent claim 15, is directed to a device 1 for determining a value that is representative of accelerations in at least two mutually perpendicular directions. As shown in FIG 1, and described on page 3, lines 21-31 and page 4, lines 13-17, the device comprises a sensor system 2 including at least two accelerometers 8, 9, 10 for providing output currents  $I_8$ ,  $I_9$ ,  $I_{10}$ .

As shown in FIG 1, and described on page 4, lines 18-22, an adder 3 is directly connected to the at least two accelerometers 8, 9, 10 for directly receiving the output currents  $I_8$ ,  $I_9$ ,  $I_{10}$  and forming a total current  $I_{tot} = I_8 + I_9 + I_{10}$ .

As described on page 4, lines 23-24, a processor 16 is configured to receive the total current  $I_{tot}$  for processing.

GROUNDΣ OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-2, 5-6 and 13-15 of U.S. Patent Application Serial No. 10/544,202 are anticipated under 35 U.S.C. §102(b) by U.S. Patent No. 6,201,476 (Depeursinge).

Whether claims 1-2, 5-6 and 10 of U.S. Patent Application Serial No. 10/544,202 are unpatentable under 35 U.S.C. §103(a) over EP 1,256,316 (Damen) in view of an article entitled "A triaxial Accelerometer and Portable Data Processing Unit for the Assessment of Daily Physical Activity" (Bouten).

Whether claims 4 and 12 of U.S. Patent Application Serial No. 10/544,202 are unpatentable under 35 U.S.C. §103(a) over Damen in view of Bouten and U.S. Patent No. 6,639,537 (Raz).

Whether claims 3 and 11 of U.S. Patent Application Serial No. 10/544,202 are unpatentable under 35 U.S.C. §103(a) over Damen in view of Bouten and U.S. Patent No. 5,983,722 (Berther).

Whether claims 7-9 of U.S. Patent Application Serial No. 10/544,202 are unpatentable under 35 U.S.C. §103(a) over Damen in view of Bouten and U.S. Patent No. 5,976,083 (Richardson).

Whether claims 4 and 12 of U.S. Patent Application Serial No.

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10/544,202 are unpatentable under 35 U.S.C. §103(a) over  
Depeursinge in view of U.S. Patent Application Publication No.  
2002/0082079 (Mantyjarvi).

ARGUMENT

Claims 1-2, 5-6 and 13-15 are said to be anticipated by Depeursinge.

Appellants respectfully request the Board to address the patentability of independent claims 1, 5 and 15, and further claims 2-4 and 6-14 as depending from independent claims 1 and 5, based on the requirements of independent claims 1 and 5. This position is provided for the specific and stated purpose of simplifying the current issues on appeal. However, Appellants herein specifically reserve the right to argue and address the patentability of claims 2-4 and 6-14 at a later date should the separately patentable subject matter of claims 2-4 and 6-14 later become an issue. Accordingly, this limitation of the subject matter presented for appeal herein, specifically limited to discussions of the patentability of independent 1, 5 and 15 is not intended as a waiver of Appellants' right to argue the patentability of the further claims and claim elements at that later time.

Depeursinge is directed to a device for monitoring the activity of a person. As shown in FIG 1, the Depeursinge monitoring device 1 comprises three accelerometers 2a, 2b and 2c which are connected to summing device 24 through two integrators 3 and 4. As correctly noted in the Advisory Action, the junction above the analog to digital (A/D) converter 5 is NOT an adder.

Further, Depeursinge specifically describes from column 2, line 57 to column 3, line 30, and shows in FIG 3 two sets of elements for two different signals associated with the x and z axes, such as two a low pass filter 7 C, 7D, and two computation circuits 7A, 7B having two difference circuits 7a, two comparator 7b and two First-In-Last-Out (FILO) registers. Thus, the A/D converter 5 does not receive or output a single signal but TWO signals, one for each "x and z axes." (See column 2, line 57, and column 3, lines 25-28).

In stark contrast, the present invention as recited in independent claim 1, and similarly recited in independent claims 5 and 15, amongst other patentable elements recites that (illustrative emphasis provided) :

the device comprising a sensor system including at least two accelerometers with which acceleration in the mutually perpendicular directions is convertible into electric signals while the value is determinable by signal processing means from an electric signal formed from the electric signals, wherein prior to the signal processing means electric signals from the at least two accelerometers are addable together by an adding element to form the electric signal, wherein outputs of the at least two accelerometers are directly connected to the adding element to form the electric signal for processing by the signal processing means.

These features are nowhere disclosed or suggested in Depeursinge. Rather, Depeursinge shows processing TWO signals associated with the x and z axes, and does not disclose or suggest that "prior to the signal processing means electric signals from the at least two accelerometers are addable together by an adding element to form the electric signal," as recited in independent claim 1, and similarly recited in independent claims 5 and 15.

The only adder in Depeursinge is element 24 shown in FIG 1, where outputs of the accelerometers are NOT directly connected to this adder 24.

In addition, there is no disclosure or suggestion in

Depeursinge of "an adder [which is] directly connected to the at least two accelerometers for directly receiving the output currents and forming a total current," for processing by a processor, as recited in independent claim 15 and dependent claims 13-14.

(Illustrative emphasis provided) Any adders in Depeursinge do not form a total current for processing by a processor, as recited in claims 13-15.

Accordingly, it is respectfully submitted that independent claims 1, 5 and 15 should be allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 2-4 and 6-14 should also be allowed at least based on their dependence from amended independent claims 1 and 5.

Claims 1-2, 5-6 and 10 are said to be unpatentable over Damen in view of Bouteren.

Damen is directed to a portable device including three accelerometers for calculating an activity parameter. As shown in FIG 3, the three accelerometers 14 are connected to an A/D converter 16 through an amplifier 15.

In stark contrast, the present invention as recited in independent claim 1, and similarly recited in independent claims 5 and 15, amongst other patentable elements recites that (illustrative emphasis provided) :

the device comprising a sensor system including at least two accelerometers with which acceleration in the mutually perpendicular directions is convertible into electric signals while the value is determinable by signal processing means from an electric signal formed from the electric signals, wherein prior to the signal processing means electric signals from the at least two accelerometers are addable together by an adding element to form the electric signal, wherein outputs of the at least two accelerometers are directly connected to the adding element to form the electric signal for processing by the signal processing means.

These features are nowhere disclosed or suggested in Damen. Rather, assuming arguendo that the A/D converter 16 shown in FIG 3 of Damen is an adder, the three accelerometers 14 are NOT directly connected to the A/D converter 16, but are connected through an amplifier 15.

In addition, there is no disclosure or suggestion in Damen of "an adder [which is] directly connected to the at least two

accelerometers for directly receiving the output currents and forming a total current," for processing by a processor, as recited in independent claim 15 and dependent claims 13-14. (Illustrative emphasis provided) Any adders in Damen do not form a total current for processing by a processor, as recited in claims 13-15.

Bouten, Raz, Berther, Richardson and Mantyjarvi are cited to allegedly show other features and do not remedy the deficiencies in Depeursinge and Damen.

Accordingly, it is respectfully submitted that independent claims 1, 5 and 15 should be allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 2-4 and 6-14 should also be allowed at least based on their dependence from amended independent claims 1 and 5.

Claims 4 and 12 are said to be unpatentable over Damen in view of Bouten and Raz.

Claims 4 and 12 should be allowable at least based on their dependence from independent claims 1 and 5.

Claims 3 and 11 are said to be unpatentable over Damen in view of Bouten and Berther.

Claims 3 and 11 should be allowable at least based on their dependence from independent claims 1 and 5.

Claims 7-9 are said to be unpatentable over Damen in view of Bouten and Richardson.

Claims 7-9 should be allowable at least based on their dependence from independent claim 5.

Claims 4 and 12 are said to be unpatentable over Depeursinge in view of Mantyjarvi.

Claims 4 and 12 should be allowable at least based on their dependence from independent claims 1 and 5.

In addition, Appellants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the

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presented remarks. However, the Appellants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

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CONCLUSION

Claims 1-15 are patentable over Depeursinge, Damen, Bouten, Raz, Berther, Richardson and Mantyjarvi.

Thus, the Examiner's rejections of claims 1-15 should be reversed.

Respectfully submitted,

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CLAIMS APPENDIX

1. (Previously Presented) A device for determining a value that is representative of accelerations in at least two mutually perpendicular directions, the device comprising a sensor system including at least two accelerometers with which acceleration in the mutually perpendicular directions is convertible into electric signals while the value is determinable by signal processing means from an electric signal formed from the electric signals, wherein prior to the signal processing means electric signals from the at least two accelerometers are addable together by an adding element to form the electric signal, wherein outputs of the at least two accelerometers are directly connected to the adding element to form the electric signal for processing by the signal processing means.

2. (Previously Presented) The device as claimed in claim 1, wherein in the adding element connections conducting the electric signals are arranged in parallel.

3. (Previously Presented) The device as claimed in claim 1, wherein the sensor system comprises at least a sensor which comprises a flexible strip made of piezoelectric material.

4. (Previously Presented) The device as claimed in claim 1, wherein the signal processing means comprise a signal amplifier, a bandpass filter and a processor.

5. (Previously Presented) An ergometer for measuring a value that is representative of a physical effort of an individual, the ergometer comprising a device that includes a sensor system having at least two accelerometers with which acceleration in mutually perpendicular directions can be converted into electric signals, while the value can be determined by signal processing means from an electric signal formed from the electric signals, wherein prior to the signal processing means the electric signals can be added together by an adding element to form an electric signal, wherein outputs of the at least two accelerometers are directly connected

to the adding element to form the electric signal for processing by the signal processing means.

6. (Previously Presented) The ergometer as claimed in claim 5, wherein in the adding element connections conducting the electric signals are arranged in parallel.

7. (Previously Presented) The ergometer as claimed in claim 5, wherein the ergometer comprises a database in which the value is correlated to a nutritional value.

8. (Previously Presented) The ergometer as claimed in claim 7, wherein the ergometer comprises a memory in which energy values can be stored over a certain period of time.

9. (Previously Presented) The ergometer as claimed in claim 7, wherein the ergometer comprises a screen on which the instantaneous effort and/or average effort can be displayed in energy values over a certain period.

10. (Previously Presented) The ergometer as claimed in claim 5, wherein the ergometer comprises a coupling to which a computer can be connected, for transferring stored data from the ergometer to the computer.

11. (Previously Presented) The ergometer as claimed in claim 5, wherein the sensor system comprises at least a sensor that includes a flexible strip made of piezoelectric material.

12. (Previously Presented) The ergometer as claimed in claim 5, wherein the signal processing means comprise a signal amplifier, a bandpass filter and a processor.

13. (Previously Presented) The device of claim 1, wherein the electric signals added by the adding element are output currents of the at least two accelerometers added to from a total current for processing by the signal processing means.

14. (Previously Presented) The ergometer of claim 5, wherein the electric signals added by the adding element are output currents of the at least two accelerometers added to from a total current for processing by the signal processing means.

15. (Previously Presented) A device for determining a value that is representative of accelerations in at least two mutually perpendicular directions, the device comprising:

a sensor system including at least two accelerometers for providing output currents;

an adder directly connected to the at least two accelerometers for directly receiving the output currents and forming a total current; and

a processor configured to receive the total current for processing.

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**EVIDENCE APPENDIX**

None

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**RELATED PROCEEDINGS APPENDIX**

None